

# Alupera®

LEADER IN VENTILATION AND HEAT RECOVERY





## ATREA HISTORY

1973

production of the first plastic heat exchanger in the Czech Republic by Ing. Petr Morávek CSc.

1989

the Velvet revolution

1990

ATREA was established

1996

first production premises reconstruction

2000

ATREA is employing 100 people

2014

moving into new production facilities

2018

ATREA's premises reached 25,000 m<sup>2</sup> and approximately 300 people



### About company:

ATREA s.r.o. was founded in 1990 by Ing. Petr Morávek, CSc., in a family house laundry room. Thanks to its founder's technological erudition, flexibility of a private family company, active business policy and efforts of its founders and senior staff, ATREA became one of the largest manufacturers of ventilation equipment in the European market with almost thirty years of experience.

ATREA currently employs nearly 300 people. The production capacities of the company are situated in Jablonec nad Nisou, about 20 km from the German border. The area of the production plant is more than 25,000 square meters with further planned expansion with state-of-the-art machinery and robotic devices for the production of top-of-the-range products.

### Production policy:

Company ATREA ranks among the leading European manufacturers of ventilation units with heat recovery. Its production program is focused on producing high quality ventilation units with heat recovery. A very important part of the company's success is, unlike with most competitors, a maxi-

mum control over the strategic components of its own production program. The company thus develops and manufactures its own heat exchangers, as well as its own state-of-the-art control system, which is directly tailored to ATREA air-handling units.

### Technological innovation:

The company's success lies in continuous technological innovation and the deep technical erudition of its founder and the entire development team. The custom development of strategic components and the pressure for continuous innovation enable us to maintain our leadership position in relation to our competition. We are also able to penetrate demanding Western markets, where manufacturers of lower quality goods can hardly establish themselves.

### Trade policy:

ATREA is a multinational company that is building up a holding firm of international subsidiaries. Since it is a family company, its trade policy is extremely active and flexible. ATREA is number one on the Czech and Slovak markets and one of the market leaders in Germany, where it has built up a strong presence through a top-class partnership lasting more than 20 years.

## Certifications:

We can prove our top-quality products by having the most demanding international certifications:

- Passive House / VDI 6022
- Eurovent / Ecodesign 2018
- Conformité Européenne / Eurasian conformity



## ATREA product range

Overall, ATREA is present in more than 23 foreign markets, including not only Germany but also the UK, Switzerland, Denmark and Australia, and is also building its own subsidiaries – currently associated subsidiaries in Slovakia, Hungary, Romania, Bulgaria, Poland, Croatia and Austria.

### Own accredited laboratory:

ATREA also has its own testing laboratory called Air-lab, which is internationally recognized, certified and accredited, and not just for measuring air-handling units with heat recovery. The company can flexibly respond to its own development trends and collaborates with laboratories such as the PHI Institute or Eurovent.

### EVIA:




ATREA is also a member of the highly important EVIA Group. EVIA brings together only the most outstanding manufacturers and largest European players in HVAC. The European Ventilation Industry Association (EVIA) was established in Brussels in July 2010. EVIA's mission is to represent the views and interests of the ventilation industry and serve as a platform between all the relevant European stakeholders involved in the ventilation sector, such as decision-makers at the EU level as well as our partners in EU Member States.

- Commercial ventilation  
– air handling units from 500–15.100 mc/h
- Residential ventilation  
– air handling units from 170–580 mc/h
- Kitchen ventilation  
– whole area ventilation ceilings and kitchen hoods
- SMART Box system
- Passive houses by ATREA
- School ventilation





OWN HEAT  
RECOVERY CORE  
PRODUCTION

-  counterflow
-  rotary
-  crossflow

Certification



VDI 6022



Eurovent



Passive House



Ecodesign 2018



Eurasian conformity

→ Compact **but efficient**

**Own production of heat exchangers** – We have our own know-how for the production of heat recovery cores. Our range consists of cross-flow and counter-flow types.

**High quality products** – We use the best components on the market, such as Belimo servos and EBM-Papst and Ziehl-Abegg fans.

**Control system** – There are two types of control system in our portfolio, a high-demand version with integrated web server or a simpler and cheaper version.

**Selection software** – A great tool for designers, easy, intuitive, includes all the technical and marketing information.

**Compact units** – Our units are very small and flexible to fit the strictest project requirements.

**Plug’n’play** – Every product is double checked before it leaves our company, so we save your money by saving time on difficult installation work.

**Remotely controlled units** – There is no need to travel long distances to fix our units. Errors can easily be fixed using the unit’s web interface.

**Certification** – We can prove the high quality of our products with various major certificates throughout our portfolio.

# ATREA's product range

## 170–580 m³/h DOMESTIC LINE

DUPLEX EC5  
DUPLEX Easy

## 500–15.100 m³/h COMMERCIAL LINE

DUPLEX Multi  
DUPLEX MultiEco  
DUPLEX Flexi  
DUPLEX Roto  
DUPLEX Basic

## 850 m³/h SCHOOL LINE

DUPLEX Inter

## KITCHEN LINE

Ventilation ceilings  
Kitchen hoods

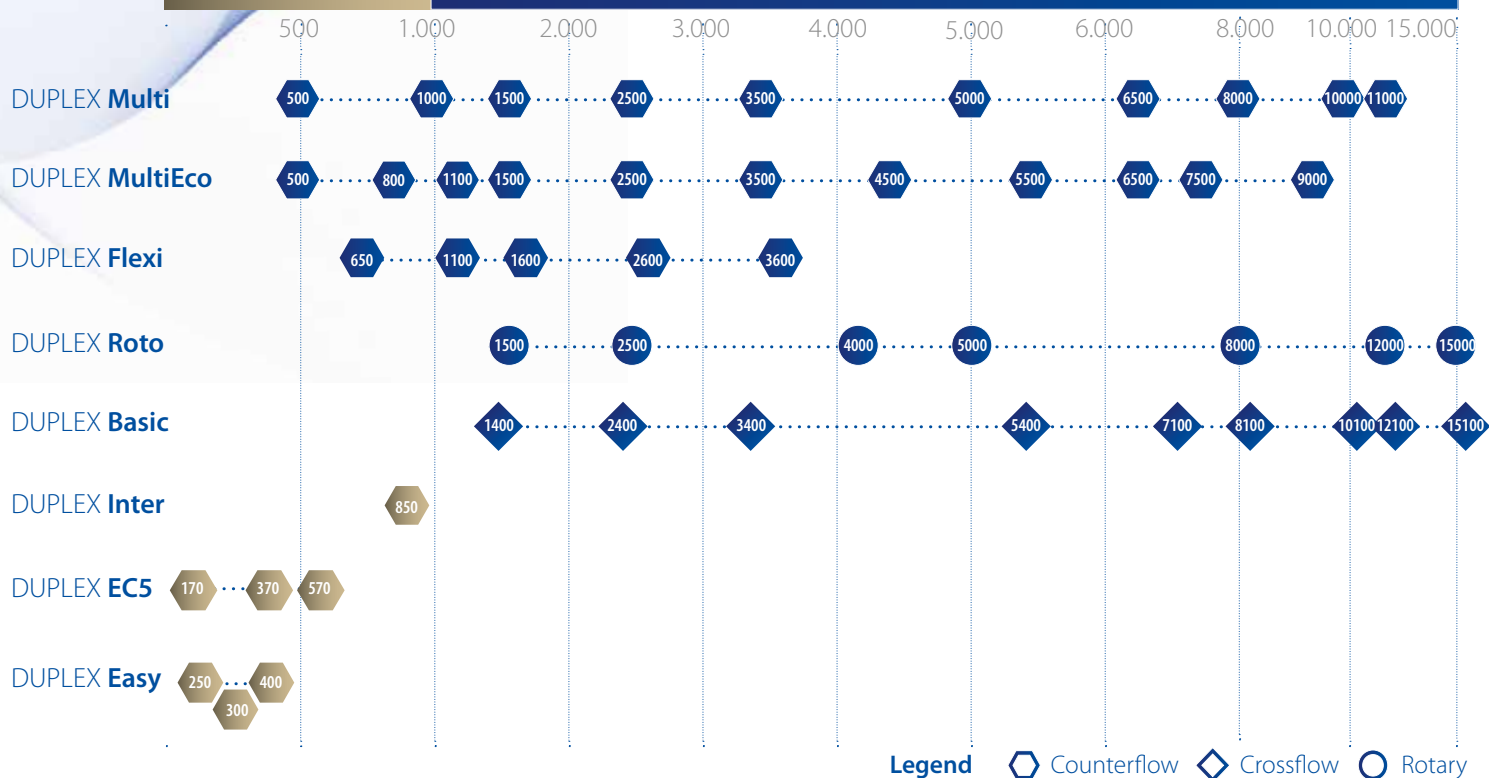
## SMART box

One supplier provides  
warranty for the entire  
ventilation system.



• Domestic range

• Commercial range



## DUPLEX Multi

500–11.000 m<sup>3</sup>/h |  Counterflow

DUPLEX Multi units represent the best of what ATREA offers to ventilate mainly commercial buildings. The philosophy of these units is based on plenty of possibilities of configuration and absolute variability. The units are exclusively tailored according to the requests and needs of individual projects. Superior construction of the units is suitably completed with the latest control system with the Internet connection.



Certification

### ADVANTAGES Multi

- Heat recovery efficiency up to 93 %
- Superior plastic counter-flow heat exchanger
- Very flat design, suitable even for ceiling-suspended mounting
- Highly variable
- Compact and semi-compact design
- Elegant look
- Integrated heating and cooling possibility
- Floor-standing, ceiling-suspended and floor-standing flat version
- The units meet requirement in accordance with Commission regulation (EU) No. 1253/2014 (Ecodesign)
- Remote control via Internet interface
- Major savings in servicing costs
- Touchscreen controller
- EC type fans – top German quality
- Smart phones application
- BMS, KNX, Bacnet compatibility
- Hygiene version according to VDI 6022
- 100 % by-pass
- Air circulation mode
- Constant airflow and pressure control

### Multi size range



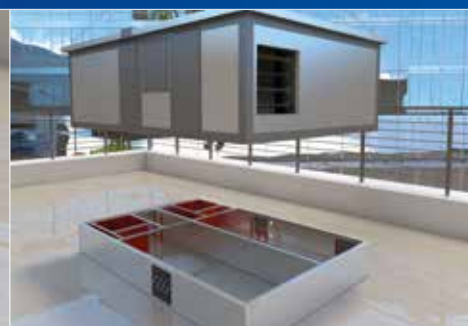
500 m<sup>3</sup>/h

11.000 m<sup>3</sup>/h

# Performance sizes DUPLEX Multi



Unique solution for rooftop units – ATREA base frame



## ADVANTAGES base frame

## TRADITIONAL

- HEAT loss
- MATERIAL expenses
- LABOUR expenses
- UNATTRACTIVE design

## ATREA

- COST saving
- NO heat loss
- ELEGANT design

## inside



## DUPLEX Multi

500–11.000 m³/h

(500, 1000, 1500, 2500, 3500, 5000, 6500, 8000, 10000, 11000)

A compact and 100 % customizable unit for various **indoor** installation positions including under-ceiling to meet all the requirements of all projects.

## vertical



## DUPLEX Multi-V

1.500–8.000 m³/h

(1500, 2500, 3500, 5000, 6500, 8000)

Air handling unit with heat recovery efficiency of up to 93 % with the same philosophy of total customization, but with special design of all **spigots upwards**.

## rooftop



## DUPLEX Multi-N

1.500–11.000 m³/h

(1500, 2500, 3500, 5000, 6500, 8000, 10000, 11000)

Excellent customized **rooftop** compact HVAC units. These units can be 100 % project tailored and have our professional S7 heat exchanger with heat recovery efficiency up to 93 %.

## DUPLEX MultiEco

500–9.000 m<sup>3</sup>/h |  Counterflow

This unit line follows up to a very successful line DUPLEX Multi and it offers a wide range of versatile ventilation units with air performance from 500 to 9.000 m<sup>3</sup>/h. The philosophy of these units is based on several possibilities of configuration and absolute variability of these units. To keep up with the latest trends, we have created a whole new generation of compact commercial ventilation units that comply with EU Directive 1253/2014 and simply put, this is a solution that will take your breath away.



Certification



### ADVANTAGES MultiEco

- Heat recovery efficiency up to 93 %
- Superior plastic counter-flow heat exchanger
- Very flat design, suitable even for ceiling-suspended mounting
- Highly variable
- Compact and semi-compact design
- Elegant look
- Integrated heating and cooling possibility
- Floor-standing, ceiling-suspended and floor-standing flat version
- The units meet requirement in accordance with Commission regulation (EU) No. 1253/2014 (Ecodesign)
- Internet interface as standard (RD5)
- Major savings in servicing costs
- Touchscreen controller
- EC type fans – top German quality
- Smart phones application
- BMS, KNX, Bacnet compatibility
- Hygiene version according to VDI 6022
- 100 % by-pass
- Air circulation mode
- Constant airflow and pressure control

### MultiEco size range



500 m<sup>3</sup>/h

9.000 m<sup>3</sup>/h



## Valuation ECODESIGN 2018



Ecodesign is a new Commission regulation (EU) No. 1253/2014 that must be followed by all EU markets. This applies to ventilation units with heat recovery; manufacturers and distributors.

**There are also few minimum requirements, such as:**

- The minimum thermal efficiency of all heat recovery systems except run-around heat recovery systems in bidirectional ventilation units shall be 73 %
- The maximum internal specific fan power of ventilation components in  $W/(m^3/s)$  for a bidirectional ventilation unit with other heat recovery system must fulfill a certain limit.
- Recommended class of filtration is F7 / M5 (supply / exhaust)
- The heat recovery system shall have a thermal by-pass
- All units shall be equipped with a multi-speed drive or variable speed drive

 **inside**



### DUPLEX MultiEco

**500–9.000 m<sup>3</sup>/h** (500, 800, 1100, 1500, 2500, 3500, 4500, 5500, 6500, 7500, 9000)

DUPLEX MultiEco units for **indoor** use. The whole range can optionally be equipped with built-in or external accessories – water or electric heating, water-based or direct cooling, shut-off dampers, by-passes and recirculation etc.


 **vertical**



### DUPLEX MultiEco-V

**1.500–6.500 m<sup>3</sup>/h** (1500, 2500, 3500, 4500, 5500, 6500)

An excellent, brand new generation of our customized compact HVAC units with all outlets **directed upwards**. These units can be 100 % project tailored and have our professional S7 heat exchanger with heat recovery efficiency up to 93 %.

 **rooftop**



### DUPLEX MultiEco-N

**1.500–9.000 m<sup>3</sup>/h** (1500, 2500, 3500, 4500, 5500, 6500, 7500, 9000)

Ventilation unit with heat recovery targeted for the **rooftop** installations. A special feature of this new generation is their superb compactness with maximum focus on minimum height and ATREA innovative solution for heat loss elimination.

## DUPLEX Flexi

650–3.600 m<sup>3</sup>/h |  Counterflow

The philosophy of these extraordinary and high-efficient unit is serial production, with subsequent availability in stock – that means delivery possibility within 24 hrs. Our customers can therefore immediately react to their clients' needs and optimize transport cost.

Certification



### ADVANTAGES Flexi

- Floor-standing and under-ceiling in one
- Off-the-shelf delivery
- Efficiency of up to 93 %
- Great compactness
- On-site variability
- Versatile positioning
- Heating and cooling
- Left or right configuration in one unit
- Major savings in servicing costs as a result of the built-in web server
- 100 % by-pass
- Constant flow and constant pressure
- VDI 6022 hygiene certification
- Wide range of additional accessories
- PHI certification of the whole Flexi range

### Flexi size range



650 m<sup>3</sup>/h

3.600 m<sup>3</sup>/h

## Performance sizes DUPLEX Flexi



### Cooling

The units can just as easily be provided with our water cooling coil with a special surface with aluminium fins to better spread water droplets to prevent them from entering the HVAC duct. As standard, either water-based or direct coolers are supplied, they can also be operated in reverse mode to act as a heat pump.



### Heating

The Flexi series units can easily be fitted with on-site heating accessories. An electrical EPO-V heater is available for use either as an electric re-heater or pre-heater. Another option is using a hot-water air heater.



#### floorstanding



#### underceiling



### DUPLEX Flexi

650–3.600 m³/h (650, 1100, 1600, 2600, 3600)

Versatile compact HVAC units designed for **indoor** installation, with a counterflow heat recovery exchanger with efficiency up to 93 % and highly efficient EC fans.

### Flexi advantages:

- Ultraslim height of underceiling installation
- Highly variable and easily adjustable on site
- Spigot connection variability (only 1600)
- Immediately available to customers!
- Left or right configuration in one unit

## DUPLEX Roto

1.500–15.000 m<sup>3</sup>/h |  Rotary

All-purpose units DUPLEX Roto with rotary heat recovery core are used for comfort ventilation, as well as hot air heating and cooling offices, shops, retail, school buildings, restaurants, etc. The units are versatile because of the compact size, high heat recovery efficiency, low power consumption and minimal noise. DUPLEX Roto completes the series of DUPLEX Multi and DUPLEX Basic units and expands ATREA with seven additional sizes of ventilation units with air capacities from 1.500 to 15.000 m<sup>3</sup>/h (nominal outputs with external pressure min. 200 Pa). Roto units follow the philosophy of multiple variability. Designers can easily modify spigot connections, filters, heating, cooling or the position of the units themselves. Superior construction of units is suitably supplemented with the latest high-tech regulation, which includes web-server and communication via the Internet.



Certification

### ADVANTAGES Roto

- Heat recovery efficiency up to 85 %
- Rotary heat exchanger certified by Eurovent
- Highly variable
- Compact or assembly design – simplifies transport and installation
- Elegant look
- Integrated heating, preheating and cooling
- Floor-standing – indoor or rooftop installation
- Great thermal insulation of the casing
- Internet interface as standard (RD5)
- Major savings in servicing costs
- EC fans – top German quality
- BMS, KNX, Bacnet compatibility
- Hygiene version according to VDI 6022
- Combined mode with air circulation
- Constant airflow and pressure control

### Roto size range





## Performance sizes DUPLEX Roto



DUPLEX 8000–15000 Roto units are assembled from 3 sections to simplify their transportation and installation. Parts can be delivered optionally and the unit can be fitted in highly inaccessible areas.

### LABYRINTH SEALING

DUPLEX Roto 8000–15000 rotary heat exchanger might be equipped with special **labyrinth sealing**. This patented solution improves the already excellent tightness against short circuit on the unique values of up to 1.5 %.



### inside



### DUPLEX Roto

**1.500–15.000 m³/h** (1500, 2500, 4000, 5000, 8000, 12000, 15000)

All-purpose units DUPLEX Roto with rotary wheel heat recovery exchangers can be provided in both versions **inside and outside** and follow the philosophy of multiple variability of other ATREA sister lines.

### rooftop



### DUPLEX Roto-N

**1.500–15.000 m³/h** (1500, 2500, 4000, 5000, 8000, 12000, 15000)

Thanks to their construction design, DUPLEX Roto-N are fully adapted for rooftop installation. Rooftop units are equipped with special hoods and roofs that protect the unit against bad weather conditions.

## DUPLEX Basic

1.400–15.100 m<sup>3</sup>/h |  Crossflow

The DUPLEX Basic units are compact ventilation units with crossflow heat recovery core. Unlike DUPLEX Multi, these units have simpler and cheaper control system and also a different heat recovery core. Their performance range is between 1400–15.100 m<sup>3</sup>/h. They are intended solely for applications that do not come under the field of activity of the committee's regulation (EU) No. 1253/2014. Ventilation units DUPLEX Basic are equipped with time-proven types of crossflow plastic heat recovery cores, which reach up to 75 % of heat efficiency with low pressure loss of air. Other important parts are the new EC fans of the highest quality – the products of the internationally recognized manufacturers EBM-Papst and Ziehl-Abegg. Since there is the emphasis on saving energy and increasing the unit's efficiency, it is essential that all the EC fans throughout the whole product line fulfill the ErP 2015 regulations (according to 327/2011) and they even distinctively exceed it. DUPLEX Basic units have a unique sandwich casing with outstanding thermal insulation and minimization of thermal bridges, which enhances the energy-saving operation of the unit.



Certification

### ADVANTAGES Basic

- Heat recovery efficiency up to 75 %
- Superior cross-flow heat exchanger
- Very flat design, suitable even for ceiling-suspended installation
- Highly variable
- Compact and semi-compact design
- Elegant look
- Integrated heating and cooling possibility
- Floor-standing, ceiling-suspended and floor-standing flat version
- Great thermal insulation of the casing
- Internet interface as standard (RD5)
- Cheaper and simpler CP control system
- A major decrease in servicing costs
- Touchscreen controller
- EC type fans – top German quality
- BMS, KNX, Bacnet compatibility
- Hygiene version according to VDI 6022
- 100 % by-pass
- Air circulation mode
- Constant airflow and pressure control

### Basic size range



1.400 m<sup>3</sup>/h

15.100 m<sup>3</sup>/h

## Performance sizes DUPLEX Basic




Heat recovery units with crossflow heat exchanger are especially suitable for the ventilation of commercial kitchens.

 inside



 vertical



 rooftop



### DUPLEX Basic

**1.400–15.100 m<sup>3</sup>/h** (1400, 2400, 3400, 5400, 7100, 8100, 10100, 12100, 15100)

Customized HVAC units with cross-flow heat recovery exchangers. This line is a cheaper version of the highest quality sister line DUPLEX Multi. Suitable for the **indoor** usage.

### DUPLEX Basic-V

**1.400–10.100 m<sup>3</sup>/h** (1400, 2400, 3400, 5400, 7100, 8100, 10100)

DUPLEX Basic line has cross-flow exchanger up to 75 % of heat recovery efficiency and could be delivered also with **all spigots up**.

### DUPLEX Basic-N

**1.400–15.100 m<sup>3</sup>/h** (1400, 2400, 3400, 5400, 7100, 8100, 10100, 12100, 15100)

These units can be 100 % project tailored and customized for the **rooftop** installations.





## DUPLEX Inter

850 m<sup>3</sup>/h |  Counterflow

Indoor ventilation units DUPLEX 850 are designed for balanced ventilation in school classrooms, open-plan offices, facilities, restaurants, shops and everywhere else where they are required to be built directly in residential areas requiring as low noise levels as possible. The units are characteristic with their high heat recovery efficiency, very low noise levels and low power input.



Certification

### 32dB!

## A new generation of school ventilation

### ADVANTAGES for designers

- Compact, stand alone design (no ducts needed for ventilation)
- Extremely easy to install, no professional installation needed
- High efficiency of heat recovery up to 93 %
- 100 % by-pass
- Automatic anti-freeze protection
- Possibility to add heater for supply air
- Complies with Ecodesign 2018
- Safe for children
- Quiet performance; does not disturb
- Automatic operation of the unit based on the air quality
- Perfect ventilation for the whole classroom
- Reduces fatigue of students and teachers, higher performance
- Healthy environment for children



The most important **ADVANTAGES:**

- ☑ No need for condensation drain
- ☑ NO ducts needed!
- ☑ Extremely quiet **32dB!**



natural wood casing

## UNIQUE lacquered design

DUPLEX Inter

Optional choice, which unifies the look of the classroom together with the DUPLEX Inter and does not optically enlarge the unit.





## SMART BOX SYSTEM

25–2.600 m<sup>3</sup>/h

SMART box system by ATREA is the only complete solution on the market, linking together a central heat recovery air handling unit, up to 63 individually controllable decentralized DCV/VAV boxes and a cutting-edge control system including sophisticated controllers and a service interface for each flat or office.



Certification

>

## One supplier provides warranty on everything

ATREA can also provide a simpler, cheaper solution – EASY box. This solution contains just the ventilation unit with heat recovery, VAV box and simpler control system.

### ADVANTAGES SMART box

- Complete ventilation system
- Guarantee from one supplier
- Lower maintenance costs (no filter replacements, etc.)
- Quiet operation due to the unit's rooftop location

### SMART box size range



25 m<sup>3</sup>/h      2.600 m<sup>3</sup>/h

## Smart solution for apartment houses

# Complete ventilation system



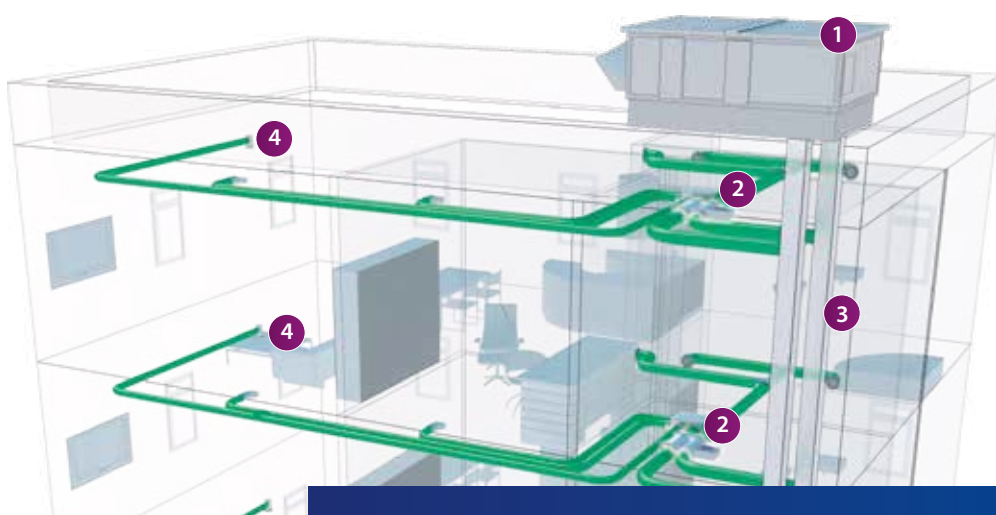
**DUPLEX Unit — SMART boxes — Control system — Internet connection**

The basis of the SMART box system is a compact heat recovery air handling unit, located anywhere inside or outside the building as chosen by the designer.

The heart of the SMART box system is a DCV/VAV controller. Compared with conventional devices, it has a wider range of settings and control options and above all minimizes energy demands.

The roof and heart of the whole system is the cutting-edge RD5 control system, offering full control of each box through a web interface or using a touch-screen controller.

This oversees the entire system for its administrator, at the same time allowing the users to control it using computers and smart phones.



- 1** central unit (rooftop; with counter-flow heat exchanger)
- 2** SMART box ensuring individual ventilation of each apartment
- 3** Central, rising air distribution - connects the central unit with the individual apartments
- 4** Distribution in apartment space – fresh supply air and exhaust air

## DUPLEX EC5

170–570 m<sup>3</sup>/h |  Counterlow

New and already fifth generation of compact ventilation units with heat recovery DUPLEX EC5, ECV5 is, just like its predecessors, meant for comfort ventilation of houses and flats. Its parameters make it particularly suitable for low-energy passive houses. It is also very suitable for the use in flats with decentralized ventilation systems or for centralized systems. The units come in two basic models – EC5 to be mounted under the ceiling and ECV5 to be mounted on walls. The EC5 and ECV5 units meet all criteria on appliance in the highest energy class A+.

Certification



**A+**



two types of control panels

### ADVANTAGES EC5

- The highest energy class A+
- Mounting on walls and under ceilings
- Three performance variants to choose from
- Counterflow heat recovery exchangers
- Heat recovery efficiency up to 95 %
- Fully closable automatic bypass
- The most energy-saving EC fans
- Simple controls
- Two types of controls for different price ranges
- Low noise emissions
- Integrated electric pre-heater/reheater
- Easily connectible control system
- Constant air flow function
- Extensible electric pre-heater/reheater
- Warm-water heating
- INTEGRATED WEB SERVER

### EC5 / ECV5 size range



170 m<sup>3</sup>/h 570 m<sup>3</sup>/h



280 m<sup>3</sup>/h 580 m<sup>3</sup>/h



## Performance sizes DUPLEX EC5/ECV5

Air pre-heaters and reheaters – For absolute comfort in ventilated areas, the units can be equipped with an integrated electric pre-heater and reheater, which are made using PTC cells. This greatly simplifies the installation and saves space. Electric pre-heater also serves as protection against the recovery exchanger freezing up.

External heaters and pre-heaters – It is also possible to choose from electric or hot-water reheaters in pipes as optional components. The electric pre-heater also serves as protection against the recovery exchanger freezing up.

### underceiling



### DUPLEX EC5 170–570 m<sup>3</sup>/h (170, 370, 570)

DUPLEX EC5 has horizontal underceiling mounting position, heat recovery core efficiency up to 92 % and EBM Papst fans.


### vertical



### DUPLEX ECV5 280–580 m<sup>3</sup>/h (280, 380, 580)

**Small and compact** air handling unit for the ventilation of residential apartments and houses with all spigots up.

## DUPLEX Easy

250–400 m<sup>3</sup>/h |  Counterflow

DUPLEX Easy is a top quality product that meets the most modern requirements. It can be mounted under the ceiling, in floorstanding position or flat position. The unit is designed for comfort ventilation in all types of residential and civil buildings, and is particularly suitable for low-energy and passive houses and flats in residential buildings with decentralized ventilation systems.

Certification



A



Two types of controls

### ADVANTAGES Easy

- 93 % counterflow heat recovery exchanger
- Top quality EC fans – German quality
- Underceiling, flat or floor-standing position
- 100 % by-pass damper
- Excellent dimensions
- Easy filter replacement
- Possible of constant pressure in the supply
- Possible of distribution the supply and exhaust air
- Certificate Passive House Institute – mark of highest efficiency

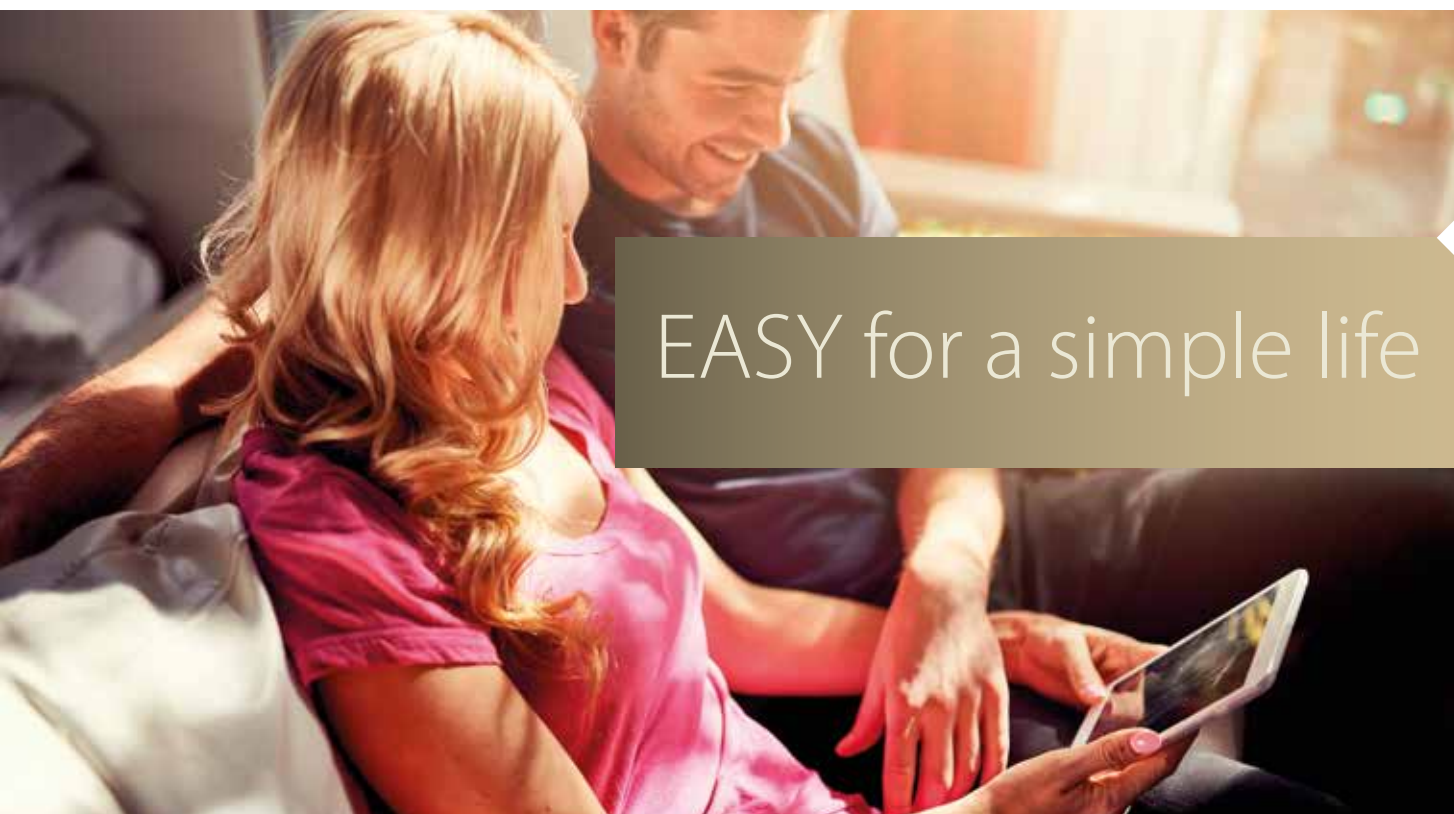


250 m<sup>3</sup>/h

300 m<sup>3</sup>/h

400 m<sup>3</sup>/h

250 m<sup>3</sup>/h 400 m<sup>3</sup>/h

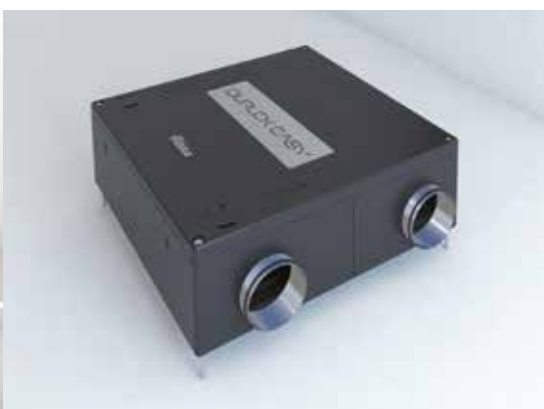


EASY for a simple life

Under-ceiling

Floor-standing flat

Wall mounted



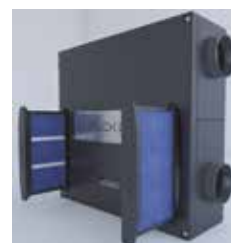
## ADVANTAGES for investors and designers

### Excellent dimensions (280 mm)

The DUPLEX Easy was developed with a constant emphasis on the market's requirements for the size of the units. **The DUPLEX Easy units' design has been modified to achieve the height of the ceiling-suspended position of 280 mm!** This factor greatly facilitates installation and saves space.

### Filters

Filters are important for a healthy indoor climate without pollutants from an outside environment. Customers can choose a filter class to meet their needs. These filters are also very easy to replace.



There are two types of control system available for our customers:

## RD5 Control system

A convenient system with integrated support for online monitoring and control via the Internet. Also with the option of connecting to the higher-ranking systems of centralized building management. A wide range of sensors (temperature, humidity, air quality, etc.) can be included in the system to enable automatic control for economical operation. The RD5 system is suitable for standard and complex applications (such as the ventilation of restaurants and offices).



CP Touch controller



CP 10 controller

### Various functions of the RD5 control system:

- Constant flow – An option to fit sensors for constant flow control.
- Constant pressure – An optional accessory for constant pressure control.
- CO<sub>2</sub> sensors, relative humidity sensors and air quality sensors – An option to set the intensity of ventilation automatically based on those parameters.
- **Modbus TCP** – Communication with a superior system for BMS.
- User preferences – including setting weekly programmes for ventilation, heating and cooling modes.
- Immediate manual override settings for more convenience to the user as well as weekly programme control.
- External inputs function – ventilation switches as required.
- Combined heating and preheating (electrical or water based)
- Zoning – the ability to split the building into zones and define their operation.
- **BACnet / KNX** – optional converter enables connection to the superior system via BACnet or KNX protocol.

### CP Touch controller

- Touchscreen and fully colourful controller
- On the wall design
- Similar design with Atrea web interface
- Built-in temperature sensor for free – ambient temperature control
- Password protected service access for enhanced safety
- 50 m distance reach
- Automatic screensaver
- Up to 4 controllers per one unit

### CP 10 controller

- Optional version
- Simple and cheaper controller for the ATREA RD5 control system
- Intuitive power and temperature setting
- Both controllers with one unit possible
- Simple On / Off button
- Suitable for easy controlling in houses, restaurants, shops etc.
- Additional full remote setting control possibility



# CP Control system

A basic digital control system. A wide range of sensors (temperature, humidity, air quality, etc.) can be included in the system to enable automatic control for economical operation. The CPM system is suitable for standard applications (such as the ventilation of restaurants and offices).



CPA controller

CPB controller

## CPA controller

- Graphic touchscreen controller
- Weekly program
- "Party" mode – when a higher ventilation performance is requested
- "Vacation" mode – automatic activation and deactivation according to a set date
- Warns when the filters need to be changed
- Automatic operation on a constant output signal – e.g. constant pressure control

**RD5 which meets all requirements for the most advanced system.**

**CP which is a cheaper and simple control system for controlling the basic functions of the unit.**

## CPB controller

- Manual or automatic mode
- Continuous fan control
- Automatic by-pass damper control
- Anti-freeze heat recovery exchanger protection
- Switching between external electric or built-in water heater
- Switching for selected performance according to an external signal
- Automatic operation according to sensors (CO<sub>2</sub>, rH) with 0–10 V output
- Control of the intake and outlet lock dampers
- Settings for minimum and maximum allowed revs
- Optional connection of CO<sub>2</sub> or rH sensor – max. 2 sensors with a switch or 0–10 V output
- Outputs for electric preheater and heater control (pulse 10 V) or hot-water control (0–10 V)



## Ventilation ceilings

ATREA is able to supply a complete solution for kitchen ventilation – from the ventilation ceiling to the air handling unit with heat recovery. Having the whole service in one package gives us a huge competitive advantage, because it is both convenient and comfortable for the customer. ATREA ventilation system is designed according to the EN16282. The construction of our ventilation system meets the most stringent criteria in terms of health requirements as well as design. The well-lit space of the entire kitchen, the draft-free supply of fresh air and perfect extraction, all that with the additional benefit of a modern control system, create a pleasant and clean environment for kitchen staff.

Certification

### BUSINESS advantages

- **Attractive design**  
Polycarbonate fillings together with stainless steel elements create a very elegant kitchen design.
- **Low purchase price**  
High quality comes along with high prices, but we maintain a competitive price level.
- **Easy maintenance**  
It is extremely easy to clean the ceiling. A wet dishrag will do the job.
- **Pleasant environment for cooks**  
People need to work in a healthy and light environment, which is not a problem when having ATREA TPV ceiling in the kitchen.
- **Light weight**  
There are no special weight demands to install ATREA ventilation ceilings.
- **Brightens up the space**

Thanks to the polycarbonate light covers, the light spreads all over the place.

- **Air-tight (closed extraction system)**  
This system ensures that no polluted air can come into contact with the building construction and thus no mold can form. This is extremely important, because we maintain a very high level of hygiene in all of our ventilation systems.

### TECHNICAL advantages

- Complete ventilation system from one producer
- Automatic control system
- Ventilates the entire area of the kitchen
- Hygienic air exchange
- High filtration efficiency
- Europe-wide TÜV certification
- Integrated supply of fresh air
- Integrated light for the whole area
- Perfect protection for the building construction

Wall-to-wall ventilation and extraction ceilings are the flagship of ATREA's range. The fundamental difference from our competitors is the design of the polycarbonate false ceiling and the shape of the extraction duct.



TPV Czech House Moscow

TPV-N



## CHARACTERISTICS

- TPV – A standard polycarbonate version of a fully illuminated ventilation ceiling.
- TPV-N – Ventilation ceiling made of stainless steel.
- SKV – A perfect design of the kitchen ventilation ceiling achieved due to arched polycarbonate panels.
- TPV EXCLUSIVE – An exclusive design created mainly for the ventilation of show kitchens. The LED technology and translucent elements give show kitchens a unique look.







## KITCHEN HOODS

A comprehensive range of extractor hoods, from the basic "KUBUS" type to an intelligent extractor hood with heat recovery, reheating and an integrated OPTIMA connection. They can be used for all sizes and types of kitchens. They are renowned for their high-quality workmanship and long service life.



### MODIS 2

MODIS 2 is part of ATREA's product line – assembled kitchen hoods with a unique construction solution based on a modular system. This line offers an option to choose how the product will be delivered.



### KUBUS

A simple hood suitable for appliances such as dishwashers and convection ovens for kitchens of all types and sizes. The operation of such appliances does not result in the particles of fat being contained in exhaust air so it is not necessary to install grease filters.

#### There are three choices to be made:

- Delivery of a disassembled hood without the spigot
  - Delivery of a disassembled hood with the spigots ready to be assembled on-site
  - Delivery of an assembled hood
  - 5 year warranty
  - Attractive design
  - Integrated light
- Compact size
  - Integrated supply of fresh air
  - Elegant design
  - Integrated LED light (remotely controlled)
  - Built-in heat exchanger with the efficiency up to 68 %
  - Built-in heaters
  - Integrated digital control system RD5



## OPTIMA

A compact kitchen hood OPTIMA with heat recovery, filtration, supply air, a heater and LED lights. Suitable for new or renovated buildings. No extra room for airhandling systems is needed. All functions are integrated inside the unit, with only the fans installed in the supply and exhaust ducts to meet requirements.



## VARIANT

Kitchen hoods VARIANT ensure efficient extraction with exhaust air filtration and simultaneously the supply of fresh air for kitchens of all sizes. They are custom made and include an automatic operation control system.

- Integrated supply of fresh air
- Integrated fluorescent light with IP65
- Low weight
- Elegant design
- Optional directing of fresh air supply
- Compact size



## GRANDE

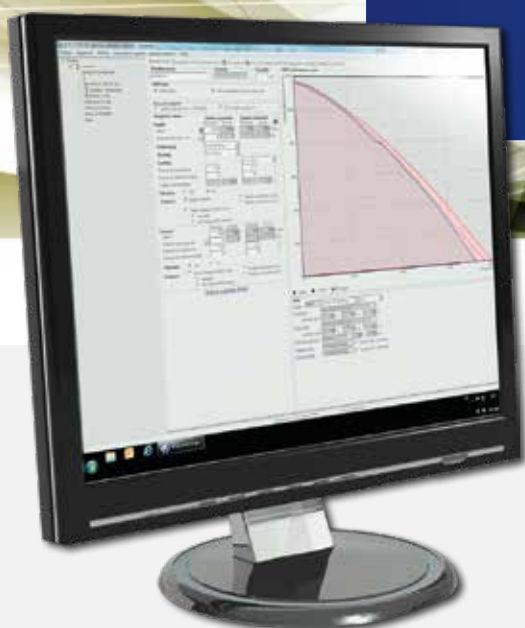
The welded stainless steel kitchen hood GRANDE was developed to meet the most stringent technical parameters according to the EN16282 and also the customer's design demands. Thanks to these parameters it can be used for ventilating cooking tops working under enormous strain and also acts as a design element.

- Stainless steel design
- Cost-saving light
- Wireless control of the light
- Minimum of mounting joints (a "fully welded" look)
- Huge accumulation space
- High efficiency of separators

# SELECTION SOFTWARE

## SELECTION SOFTWARE

- ATREA offers its proprietary design software that is a highly useful and practical tool to select DUPLEX series units and provide great marketing support!
- Very detailed calculations on all specifications are standard.
- The software checks whether all components were selected and whether the selected system is working. This way you can avoid any possible mistakes.



ATREA selection software is frequently updated and available to download for FREE.

### IT INCLUDES

- Selecting a unit and its accessories
- Showing parameters of the selected appliance
- An option to adjust the various parameters, designs or mounting positions of the units
- Selecting the control system with accessories in a functional set
- Electrical wiring diagrams
- Displaying and printing the components installed, an h-x diagram and HVAC diagrams
- Price specifications of individual components
- Print output to a printer or PDF
- Exporting drawings and diagrams to DXF in 2D or 3D
- Sending the design and export by e-mail
- Additionally, the design software includes a full catalogue of ATREA's products in PDF format.

# ATREA CERTIFICATES

We, as ATREA, **can prove our quality by having premium European certificates** and complying with highest European standards. Thus, we give the base to our customers to win even the most difficult projects.



EU directive No. 1253/2014, which applies to ventilation units with heat recovery; manufacturers and distributors. According to this directive, the airhandling unit must meet the following minimum requirements:

**1) residential ventilation units** max flow rate **does not** exceed 250 m<sup>3</sup>/h or is between 250–1.000 m<sup>3</sup>/h and the manufacturer declares its use only for residential ventilation application (within ATREA product range DUPLEX Easy, EC5).

**2) non-residential ventilation units** max flow rate exceeds 250 m<sup>3</sup>/h and is between 250–1.000 m<sup>3</sup>/h and the manufacturer **does not** declare its use for residential ventilation application (within ATREA product range DUPLEX Flexi, Roto, Multi, MultiEco)

All ventilation units, except dual use units, shall be equipped with a multi-speed drive or a variable speed drive. All bidirectional ventilation units shall have a heat recovery system. The heat recovery system shall have a thermal by-pass facility.



Passive House certificate; our units are certified based on **few minimal requirements** that need to be fulfilled in order to obtain this certificate.

These are:

- **Recovery efficiency**  
75 % SFP – 0.45 W/m<sup>3</sup>/h
- **The tightness of the casing**  
and between sections in the unit – max. 3 % of the nominal flow
- **Noise**
- **Power energy consumption**  
during active frost protection of the heat exchanger

German norm with very strict requirements. It guarantees that **health-conscious materials** have been used, together with smooth surfaces that **do not support the growth or spread of micro-organisms**. This is declared by the special ISO EN846 test. It also defines minimal requirements for the unit's construction, so all the parts of the unit are **easily accessible and safe** to reach. Moreover, it takes in account the indoor air quality by determining the proper filtration class.

This independent certificate organ **ensures customers, that declared parameters by producer are true**. Eurovent can certify both – an air-handling unit or a heat exchanger.



LEADER IN VENTILATION AND HEAT RECOVERY



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